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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/677,155

10/01/2003

Hui-Chuan Hung

67,200-1114

8165

7590

04/04/2006

TUNG & ASSOCIATES

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EXAMINER

NGUYEN, JIMMY

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,155

Applicant(s)

HUNG, HUI-CHUAN

Examiner

Jimmy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Argument

The examiner acknowledges the RCE filed 3/22/06 with the following effect;

The applicant argues that Ishii et al are fail to disclosed " a movable electrical probe tip separated from electrical test head and positionable with respect to the electrical test head such as to electrically stress a portion of the microelectronic product other than an electrical contact portion of the microelectronic product while electrical test head is simultaneously positionable to electrically contact said electrical contact portion " . The examiner is respectfully traversed this argument.

The amended claim is unclear " " a movable electrical probe tip separated from electrical test head " there is no support in the specification to indicate that the electrical probe tip is separate from the test head. Further, the electrical probe tip connected to the test head and then connected to the tester in order to the supply the test signal from the tester to semiconductor devices, or electrical probe tip connected to the semiconductor devices then detect the output signal from semiconductor devices then transmit the output signal to the tester for analyzing. Either way, the electrical probe tip is part of the test head.

In addition, Ohno et al disclosed the probe test device by using optical device and electrical contact, both Ohno et al and Ishii et al are teaching the method of testing semiconductor devices in the same testing environment, therefore one of the skill the art would recognize that the combination is proper.

Claims objection

Claims 1 – 20 are objected because the amended claim is unclear “ “ a movable electrical probe tip separated from electrical test head “ there is no support in the specification to indicate that the electrical probe tip is separate from the test head. Further, the electrical probe tip connected to the test head and then connected to the tester in order to supply the test signal from the tester to semiconductor devices, or electrical probe tip connected to the semiconductor devices then detect the output signal from semiconductor devices then transmit the output signal to the tester for analyzing. Either way, the electrical probe tip is part of the test head. How can the electrical probe tip be separated from the test head. Clarification is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 6, 8 – 13, 15 – 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii et al (US 5,493,236).

As to claim 1, Ishii et al disclose (fig 1) an apparatus for electrically testing a Microelectronic product comprising:

an electrical test head (40b) to which is mated a microelectronic product (20) for electrically testing the microelectronic product (20); and

movable electrical probe tip (45) positioned with respect to the electrical test head (40b) such as to electrically stress a portion (column 6 lines 56 – 67 and column 7 lines 1 - 31) the microelectronic product (20) other than an electrical contact portion of the microelectronic product (20).

As to claims 2 - 4, 10, 11, Ishii et al disclose (fig 1) an apparatus of claim 1 wherein the microelectronic product (20) is semiconductor product, ceramic substrate and optoelectronic product.

As to claims 9, 16, Ishii et al disclose (fig 1) an method for electrically testing a microelectronic product comprising:

an electrical test head (40b) to which is mated a microelectronic product (20) for electrically testing the microelectronic product (20); and

movable electrical probe tip (45) positioned with respect to the electrical test head (40b) such as to electrically stress a portion (column 6 lines 56 – 67 and column 7 lines 1 - 31) the microelectronic product (20) other than an electrical contact portion of the microelectronic product (20)

sequentially movably positioning the electrical probe tip (45) and electrically biasing the microelectronic product while simultaneously electrically testing the microelectronic product (20).

As to claims 5, 12, 17, Ishii et al disclose (fig 1) the controller (61) which:
controls electrical probe tip (45) positioning and biasing (column 6 lines 56 – 67 and
column 7 lines 1 - 31) with respect to the portion of the microelectronic product (20)
other than the electrical contact portion of the microelectronic product; and
simultaneously collects corresponding electrical test data from the
microelectronic product (20).

As to claims 6, 13, 18, Ishii et al disclose (fig 1) the radiation beam source (31)
positioned with respect to the electrical probe tip (45) such as to simultaneously
radiation stress the portion (column 7 lines 32 – 49) of the microelectronic product (20)
other than the electrical contact portion of the microelectronic product.

As to claims 8, 15, 20, Ishii et al disclose (fig 1) the apparatus wherein the
electrical probe tip (45) and the radiation beam source (31) are on the opposite side of
the microelectronic product (20). (column 2 lines 52 – 55).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 14, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US 5,493,236) in view of Ohno et al (US 5,091,692).

As to claims 7, 14, 19, Ishii et al disclose (fig 1) everything except for the apparatus wherein the electrical probe tip and the radiation beam source are on the same side of the microelectronic product.

On the other hand, Ono et al teach (fig 3) the apparatus wherein the electrical probe tip (7) and the radiation beam source (40) are on the same side of the microelectronic product (2).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the testing system with light source on the same side of the semiconductor device for the purpose of simulate the signal to devices in front surface of the dut.

Conclusion

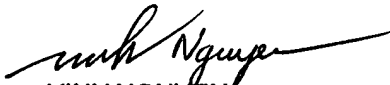
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571 -272-1965. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtez Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN.
April 1, 2006


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
04/03/06